

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/811,850	HA, CHANG JIN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Robert W. Horn	2837	

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to amendments and arguments dated 9/18/2006.
2.  The allowed claim(s) is/are 1-5,7-12 and 14-30.
3.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All      b)  Some\*    c)  None    of the:
    1.  Certified copies of the priority documents have been received.
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
  - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
6.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1.  Notice of References Cited (PTO-892)
2.  Notice of Draftperson's Patent Drawing Review (PTO-948)
3.  Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4.  Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5.  Notice of Informal Patent Application
6.  Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7.  Examiner's Amendment/Comment
8.  Examiner's Statement of Reasons for Allowance
9.  Other \_\_\_\_\_.

LINCOLN DONOVAN  
SUPERVISORY PATENT EXAMINER

**DETAILED ACTION**

***Response to Amendment***

The examiner acknowledges amendments to claims dated 9/18/2006. The amendments are accepted as proper in that no new material has been incorporated into the application. With the amendments:

claim 1 is amended to incorporate the allowable material of now canceled claim 6;

claim 11 is amended to incorporate the material of now cancelled claim 13;

claim 23 has been amended to add a statement on the utility of the claim.

***Response to Arguments***

Applicant's arguments, see Remarks/Arguments, filed 9/18/2006, with respect to claims 11; 1-5 and 10; 12-13 and 17; and 23 have been fully considered and are persuasive. The rejections of 1-5 and 10; 11-12 and 17; and 23 has been withdrawn.

***Allowable Subject Matter***

Claim 1-5, 7-12 and 14-30 allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claim 1 is allowable over prior art for all the indented limitations, but especially the limitation:

wherein the controller selects one second resolution PWM control signals corresponding to a selected rotation speed of the cooling fan, wherein the second resolution control signals are higher resolution than the first resolution PWM control

signals, and wherein the combination of different first resolution PWM control signals approximates the selected resolution signal.

Claim 11 is allowable for all the indented limitations, but especially the limitation:  
wherein the control means selects one step corresponding to a selected rotation speed of the cooling fan from the information of the steps of the second resolution, wherein the combination of the different PWM control signals in the predetermined time ratio approximates the selected one step of the second resolution.

Claim 23 is allowable for all the indented limitations, but especially the limitation:  
generate a driving pattern for driving the device that approximates the selected second resolution driving pattern using a combination of the selected at least two first resolution driving patterns at a predetermined ratio.

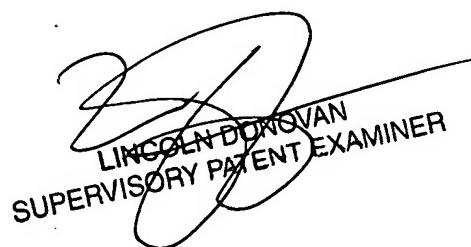
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Horn whose telephone number is 571-272-8591. The examiner can normally be reached on Monday-Friday 7:00-3:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln D. Donovan can be reached on 571-272-2800, ext 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

rwh  
October 26, 2006



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SUPERVISORY PATENT EXAMINER